



Lake Erie Harmful Algal Bloom Bulletin

19 August, 2019, Bulletin 15

Analysis

The *Microcystis* cyanobacteria bloom continues in the western basin of Lake Erie. Recent satellite imagery (8/16-18) is partially clouded, limiting analysis. Imagery from 8/17 shows the bloom extending from Maumee Bay north along the Michigan coast to Brest Bay, east along the Ohio coast to the Marblehead Peninsula; and offshore 3 miles west of the Bass Islands. Measured toxin concentrations exceed the recreational threshold where the bloom is most dense (appearing green from a boat). *Keep pets and yourself out of the water in areas where scum is forming.* The persistent cyanobacteria bloom in Sandusky Bay continues. No other blooms are present in Lake Erie.

Forecasts

Winds (3-6 kn) forecast today and tomorrow (8/19-20) will promote scum formation. Winds (5-11 kn) forecast Wednesday and Thursday (8/21-22) will support mixing and eastern transport of surface *Microcystis*. - Keeney, Davis

Additional Resources

To find a safe place for recreation, visit the Ohio DOH "BeachGuard" site: <http://publicapps.odh.ohio.gov/beachguardpublic/>

Ohio EPA's site on harmful algal blooms: <http://epa.ohio.gov/HAB-Algae>

NOAA's GLERL provides additional HAB data here: http://www.glerl.noaa.gov/res/HABs_and_Hypoxia

The images below are "GeoPDF". Please visit <https://go.usa.gov/xReTC> for instructions on viewing longitude and latitude.

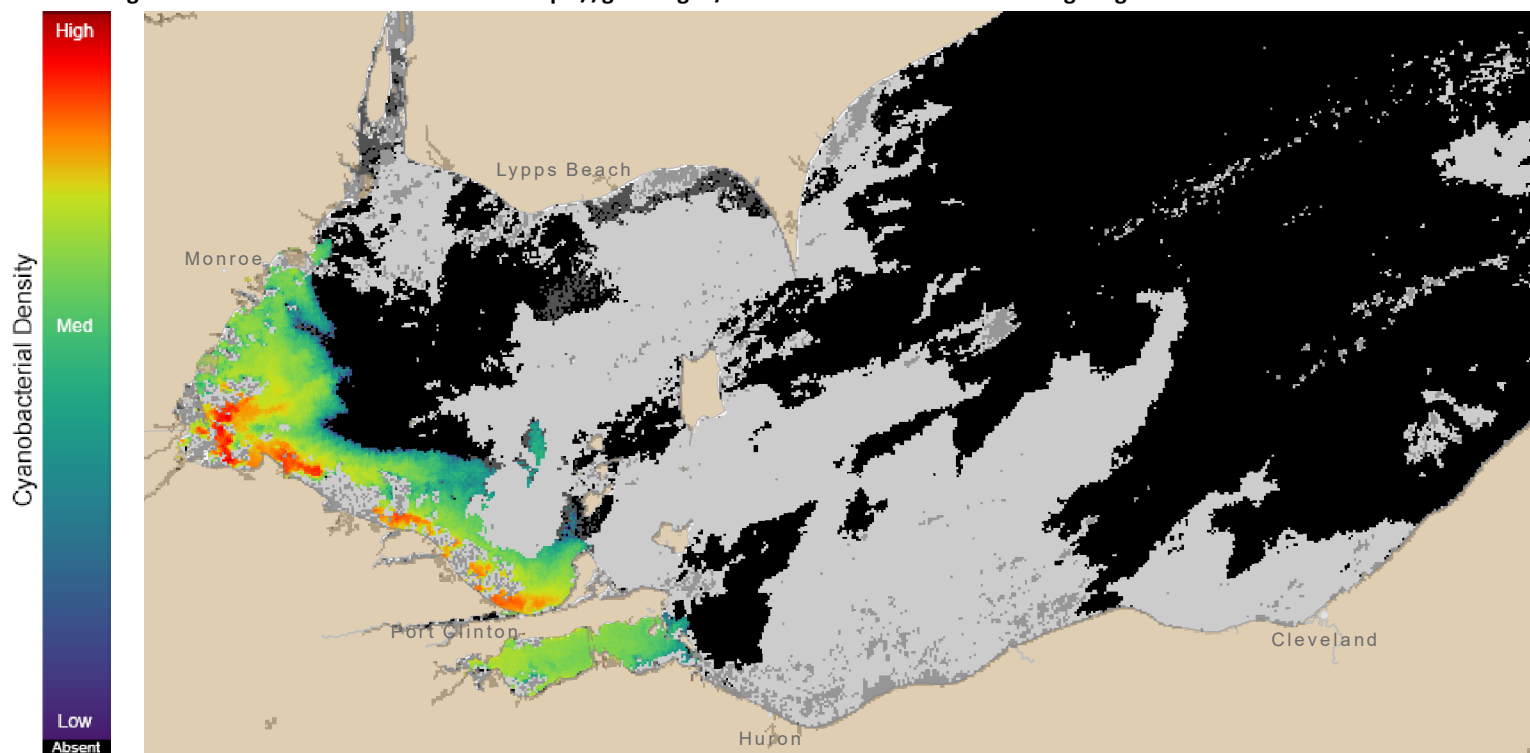


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 17 August, 2019 at 12:04 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

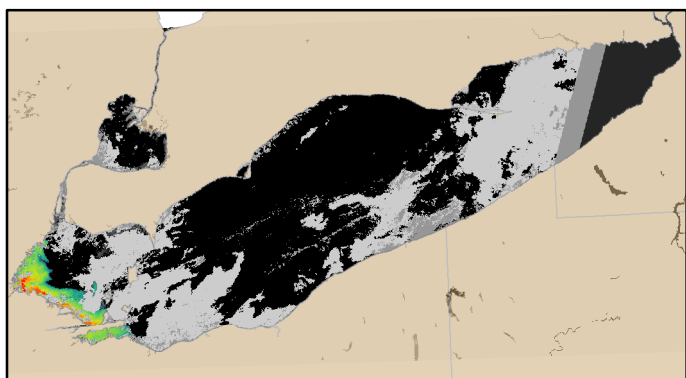
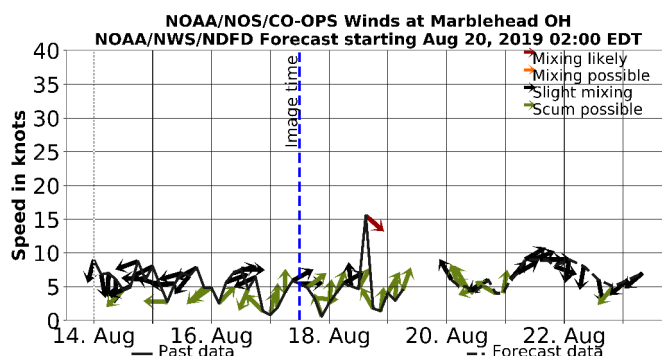


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 17 August, 2019 at 12:04.



Wind speed and direction from Marblehead, OH. Blooms mix through the water column at wind speeds greater than 15 knots (or 7.7 m/s).

For more information and to subscribe to this bulletin, go to: <https://tidesandcurrents.noaa.gov/hab/lakeerie.html>

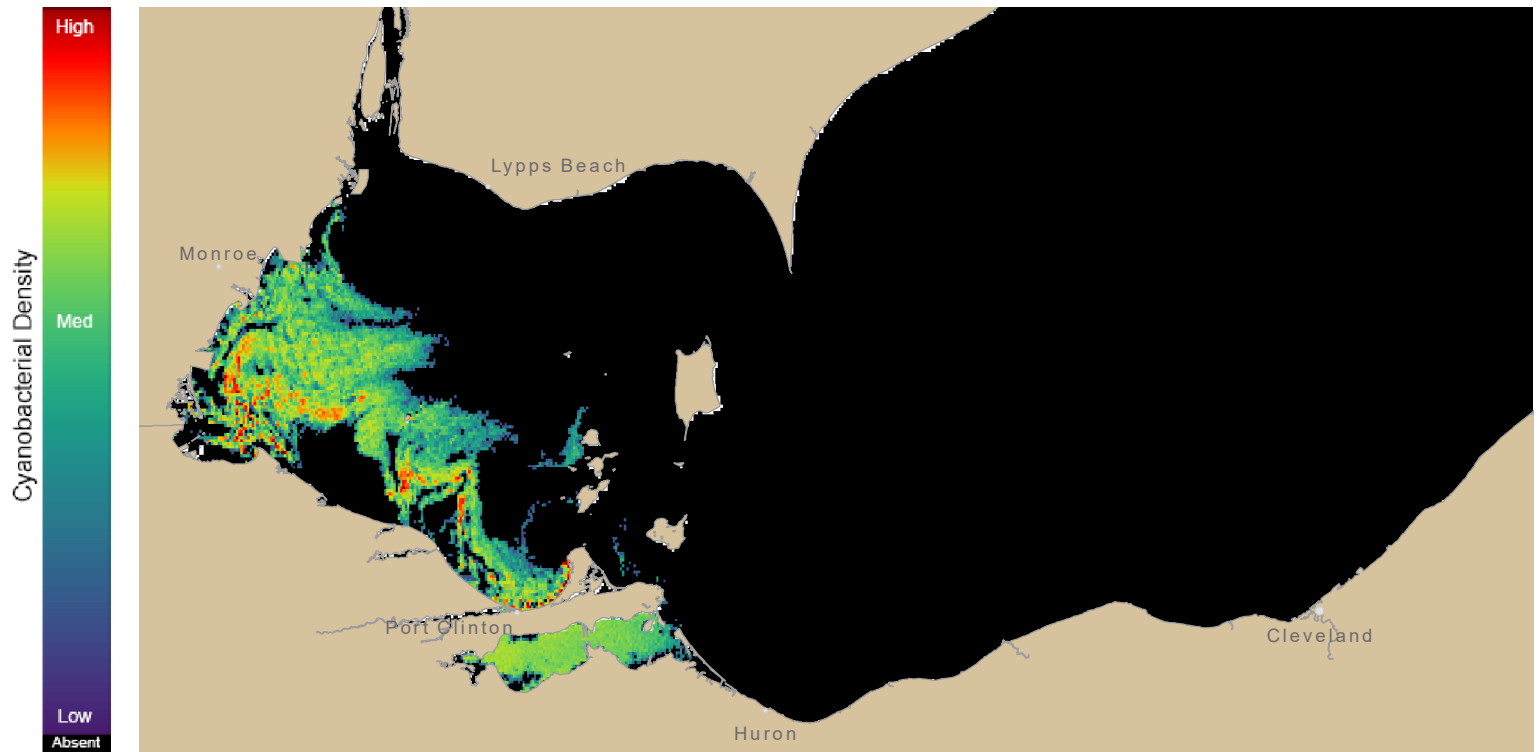


Figure 3. Nowcast position of bloom for 19 August, 2019 using LEOFS modelled currents to move the bloom from the 17 August, 2019

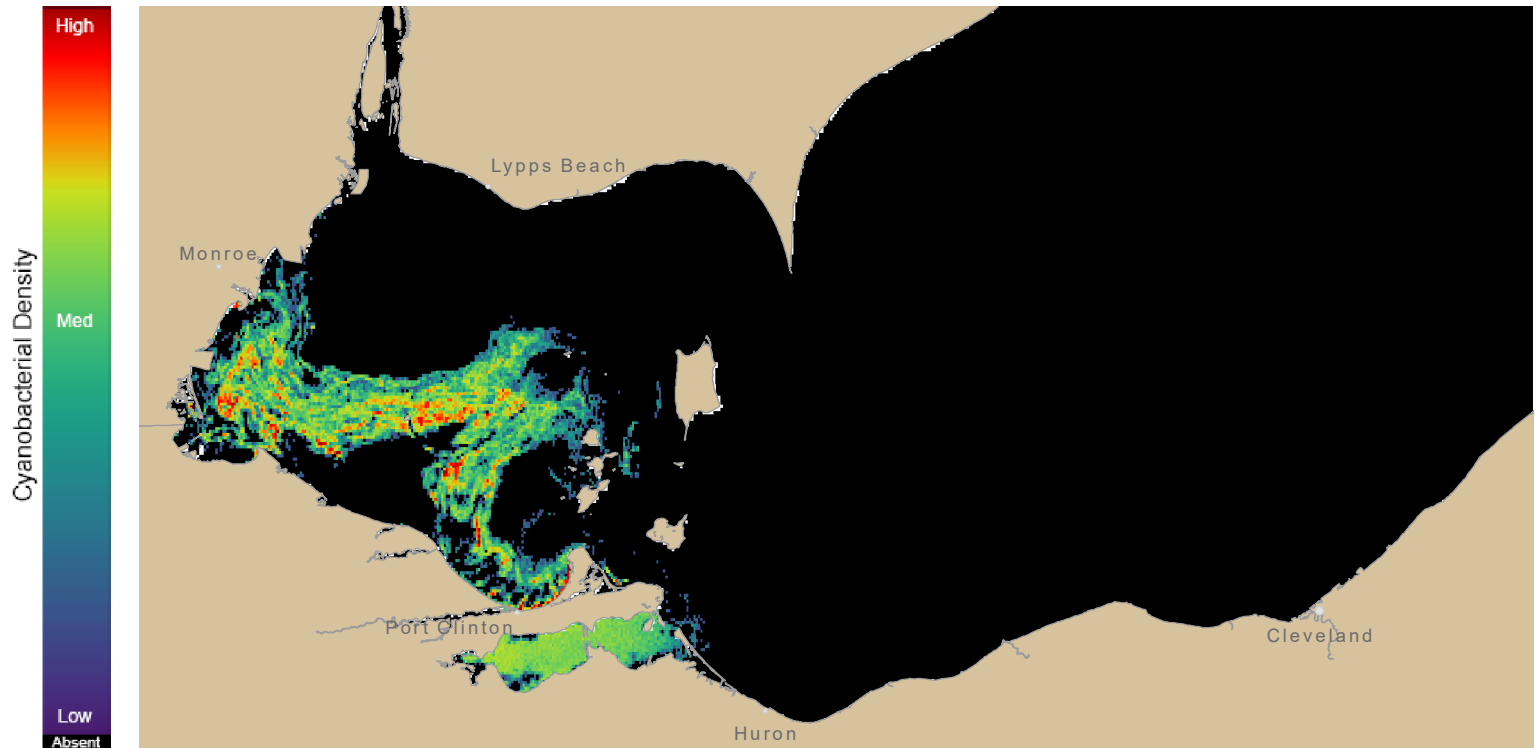
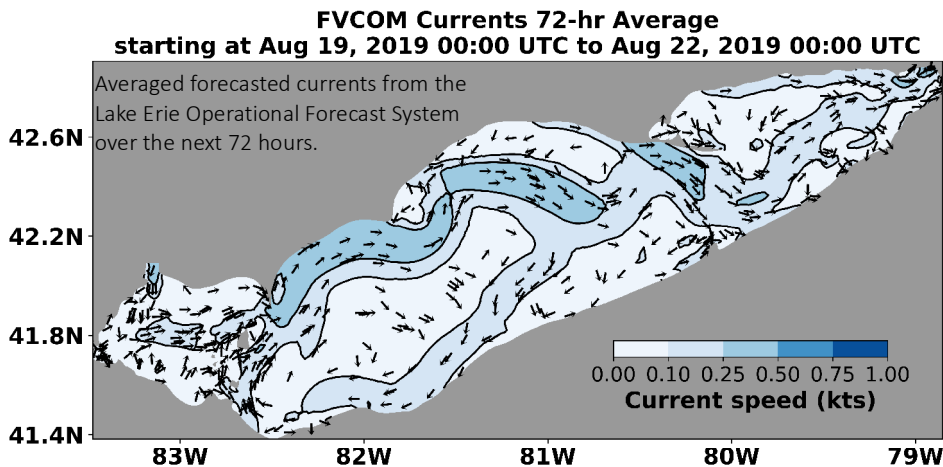


Figure 4. Forecast position of bloom for 22 August, 2019 using LEOFS modelled currents to move the bloom from the 17 August, 2019



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